

# CA JOURNAL

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## Basic Air Traffic Control Is Sought by Joint Board

The Secretaries of Defense and Commerce recently announced that they have agreed to set up an Air Navigation Development Board charged with developing a single basic system of air navigation and traffic control which will meet the needs of civil and military users.

A temporary working group from the Navy, Air Force, and the Civil Aeronautics Administration is formulating the detailed organization and procedures for the Board, which will be composed of one representative from each of those three agencies.

The joint action of the two Secretaries is a result of a 6 months' study made by the Research and Development Board of the National Military Establishment. A special Ad Hoc Committee on Air Navigation, appointed by the RDB to consider the problem, has just issued its report, "Navigation and National Security."

**Headed by Air Lines' President.**—The committee, which was headed by R. S. Damon, President, American Air Lines, recommended that "a single basic system of air navigation traffic control—a truly national system—must be developed and installed which will satisfy the requirements of all users to the greatest extent feasible." The Ad Hoc Committee's recommendations provided for coordination of the military program for air defense with the over-all air navigation program.

Several members of the Research and Development Board Committee also served on a special committee (SC-31) of the Radio Technical Commission for Aeronautics which recently released its report "Air Traffic Control," giving detailed recommendations for air navigation and traffic control devices. These findings are expected to serve as a guide for the members of the new Air Navigation Development Board.

The establishment of the Board is in line with the RDB recommendations that a single organization be established under the Department of Commerce and charged with the responsibility for the research, development, and standardization of the national air navigation system. Such a group constitutes a planning and steering group to be headed by a man of national stature who, the Committee recommends, should not represent any government agency concerned with civil or military aviation.

**Engineering Staff Recommended.**—The committee further recommended that there be placed

under the planning and steering group a highly qualified engineering staff charged with translating the broad requirements set by the Board into technical specifications for the development of projects which

(See *Air Traffic Control*, Page 71)

## National CAA Board to Review Type Certificate Rulings

The Civil Aeronautics Administration has decided to establish a national review board to obtain uniformity in certifying types of aircraft.

Type certificates are granted by special boards of CAA officials in the regional offices, in line with the policy of the CAA to decentralize its work. There have been variations in the decisions of these regional boards, and the national board will be available for appeals or the settling of controversial questions.

**Regional Boards.**—In the regions the boards are made up of the superintendent of the Aircraft Branch and the heads of the manufacturing inspection, engineering and maintenance divisions under him, and selected experts in other related fields. On large transport planes, medical men and safety experts of the CAA often participate in the service tests which precede award of the type certificate which permits quantity manufacture of an aircraft.

On the national review board, Charles F. Dycer, Director of the Aircraft Service, and his staff will serve. In addition, Delos W. Rentzel, Administrator of Civil Aeronautics, and A. S. Koch, Assistant Administrator for Aviation Safety, will act in an advisory capacity when special problems arise.

This board would review the work of any regional board upon request of the manufacturer of the plane in question, or of any operator whose alterations on a plane involved design changes affecting safety. Representatives of aircraft manufacturers and of air lines and other operators were consulted by the CAA and approve formation of such a review board.

## Rentzel Sworn in As Head of CAA; Succeeds Wright

Delos W. Rentzel, veteran aeronautical electronics authority, was sworn in as Administrator of Civil Aeronautics by Charles Sawyer, Secretary of Commerce, on June 1.

Mr. Rentzel, who has been identified with aviation for many years, was appointed by President Truman April 8 to succeed T. P. Wright, resigned, and his appointment was confirmed by the United States Senate May 5.

At the time of his appointment, Mr. Rentzel was President of Aeronautical Radio, Inc., a position he had held since 1943. Previously he had been Director of Communications for American Airlines.

Mr. Rentzel did radio work for the United States Navy from 1929 to 1931, when he went to American Airways, Inc. In 1934 he went with American Airlines, where he was successively Station Manager and System Chief Operator, Assistant Director of Communications and Director of Communications. He was also a member of the Board of the Airborne Instruments Laboratory.

During the war he was a consultant to the Secretary of War in the establishment of airways and communications services. He also served as a consultant to the Secretary of the Navy.

**Many Other Activities.**—His other activities included the chairmanship of the Aeronautical Radio Panel of the Radio Technical Planning Board since August 1943; vice-chairman of the Radio Technical Commission for Aeronautics since 1944; consultant for the Congressional Aviation Policy Board since October 1947; and member of the Board of Directors of the Airborne Instruments Laboratory.

He was issued a private pilot's license in August 1938 and holds membership in the Institute of Aeronautical Sciences, Society of Automotive Engineers, Aircraft Owners and Pilots Association and the American Ordnance Association.

A native of Houston, Tex., where he was born October 20, 1909, Mr. Rentzel was educated at Houston High School and the Texas A. and M. College. He is married and has two children, Delos W. Rentzel, Jr., and Thomas Lance Rentzel.

# It's Now "Office of Aviation Safety"; Safety Regulation Title Is Changed

"Office of Aviation Safety" became the name of the Office of Safety Regulation of the Civil Aeronautics Administration effective June 1, F. B. Lee, Acting Administrator of Civil Aeronautics, announced.

The new designation was adopted, Mr. Lee explained, "to reflect more closely the nature of the functions performed by that office." The names of three subordinate services of the office also were changed in the interests of brevity. Aircraft and Components Service became Aircraft Service; Aircraft and Components Branch (field offices) became Aircraft Branch; and Aviation Medical Service became Medical Service. No functions of the offices affected were changed.

The Office of Aviation Safety representatives in the field, formerly called Inspectors, now are called "Agents."

**Describes Work.**—This name more accurately describes the work they do, and follows nomenclature used in other Government departments such as the Department of Agriculture "County Agent." In the 13 international field offices of the CAA where one of the main duties of Office of Aviation Safety representatives is to provide advice on United States techniques and equipment, they are called "Advisors."

The Office of Aviation Safety is one of the four major divisions of the CAA. Its job is safety. To that end, it is responsible for the design and manu-

facture of aircraft. More and more, this responsibility is being discharged through carefully selected industry representatives who issue airworthiness certificates to planes properly designed, built and maintained. It is responsible for the competency of pilots, mechanics, and other airmen, and through a large body of qualified volunteers, issues certificates to them.

In the interest of the safety of the air traveling public, this office approves operation procedures for air lines; its agents ride in the cockpits with pilots to determine their fitness and knowledge to fly the routes to which they are assigned, and they examine the maintenance and operations methods employed by the air lines.

"No part of the CAA more directly works to 'foster and encourage the development of civil aviation' as we are charged to do by Congress, than the Office of Aviation Safety," Mr. Lee said. "The Agent meets the flying public on the grassroots flying field, and the huge terminal airport, advising and helping the new pilot, the airport operator, the air line operations man, the maintenance superintendent—everybody connected with the use of the airplane. Although it is his assignment to see that Civil Air Regulations are respected and obeyed, yet 90 percent of his work is in cooperative assistance to those who use aviation for pleasure or to whom it is a livelihood.

"Over the years since 1926 when Congress first designated a Federal agency to regulate and promote flying, the emphasis on promoting, instead of regulating, has been growing. There are still in aviation the few who fly recklessly, or operate carelessly, and it is for these that the regulations were written, but the great mass of people in aviation meet the Agent as an advisor, friend, and guide."

## Skyways 99 and 101 Designated By CAA

Official designations of Skyways 99 and 101 were announced recently by the Civil Aeronautics Administration.

Skyway 99 extends from Vancouver, British Columbia, to San Diego, Calif., following highway 99 rather closely and passing through Seattle and Tacoma, Wash.; Portland, Salem, Eugene, Medford, Oreg.; Redding, Sacramento, Stockton, Fresno, and Bakersfield, Calif.

Skyway 101 extends from Seattle, Wash., to Los Angeles, Calif., along the Pacific coast, passing through Tacoma and Aberdeen, Wash.; Astoria, Tillamook, Newport, and North Bend, Oreg.; Eureka, Laytonville, San Francisco, Salinas, and Santa Barbara, Calif.

**Cities and Towns Proposed Routes.**—Many of these towns and cities originally proposed these skyway routes to CAA and agreed that, if designated, they would give leadership in their immediate areas to the work of installing standard CAA markers and the skyway insignia.

Official designation clears the way for action in air marking which will generally be under the direction of the various State aviation commissions. Practically all State aviation commissions have been actively engaged in air marking.

## Air Mail Rates Set For Southwest Airways

Final rates for the transportation of mail by Southwest Airways Co., a feeder air carrier operating in Oregon and California under a temporary 3-year certificate, were proposed in a statement of tentative findings and conclusions issued recently by the Civil Aeronautics Board.

The Board established separate rates for the past and future periods of Southwest's operations as follows:

(1) A lump sum payment of \$1,893,658 which is equivalent to 81.14 cents per revenue plane mile for the past period from December 2, 1946, through March 31, 1948. This sum will entitle Southwest to approximately \$936,000 in addition to the mail pay already received under the present temporary rate order; and

(2) A sliding scale mail rate which varies inversely with the passenger load factor for the future period. The maximum mail rate of 55 cents per plane mile is applicable when the load factor is below 42 percent and at a 45 percent average load factor the mail rate is 52.60 cents per plane mile. Annual mail compensation is estimated at \$1,204,000 on the basis of the mail rate at a 45 percent load factor.

The Board pointed out that the 3-year temporary certificate issued to feeder air carriers was adopted as a safeguard against static and progressively increasing dependence on the Government and as a means of limiting subsequent permanent status only to such air services as have shown during the life of the temporary certificates that they are capable of operation without undue cost to the Government and with a progressive reduction of such costs.

Southwest presently receives a temporary rate of 60 cents per airplane mile, under a sliding scale, decreasing to a minimum of 35 cents per airplane mile under certain conditions.

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DEPARTMENT OF COMMERCE  
Charles Sawyer, Secretary

Civil Aeronautics Administration  
D. W. Rentzel, Administrator

Ben Stern, Asst. Administrator  
for Aviation Information

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## CAA and CAB Releases

Copies of CAA releases may be obtained from the CAA Office of Aviation Information. CAB releases are obtainable from the Public Information Section of the Board. Both offices are located in the Department of Commerce Building, Washington 25, D. C.

### Administration

Monthly CAA Figures Show Air Line Plane Increase (May 1).

CAA Lists 453 Seaplane Bases for Aerial Vacationists (May 2).

CAA Designates Skyways 99 and 101 on West Coast (May 1).

Alaska CAA Men Aid in Locating Plane Wreck (May 7).

CAA Reports Greater Use of Radio in Personal Planes (May 17).

CAA Lets Contracts for High-intensity Approach Lights (May 18).

CAA to Establish National Board to Review Aircraft Type Certificates (May 15).

CAA Announces Six New Members of Advisory Committee (May 19).

Single System to be Developed for Civil and Military Air Traffic (May 23).

CAA Safety Regulation Office to be Known as Office of Aviation Safety (May 24).

### Board

Decision in Air Freight Rate Investigation (CAB 48-32) April 22, 1948.

Mileage and Traffic Statistics for January 1948 (CAB 48-33) April 23, 1948.

Southwest Airways Feeder Mail Rate (CAB 48-34) April 28, 1948.

Hearing Date Set on Pan American Accident at Shannon, Ireland (CAB 48-35) May 10, 1948.

Analysis of Trans-Atlantic Passenger Traffic (CAB 48-36), May 12, 1948.

Adams Sworn in as Board Member (CAB 48-37) May 13, 1948.

Northwest Airlines-American President Lines Agreement Approved (CAB 48-38) May 13, 1948.

Financial Year-End Figures (CAB 48-39) May 13, 1948.

Resignation of Stanley Gewirtz, Executive Assistant to the Chairman and Appointment of Paul W. Cherington as His Successor (CAB 48-40) May 14, 1948.

Mileage and Traffic Statistics for February 1948 (CAB 48-41) May 18, 1948.

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# ICAO Proposes Sets of Standards In Seeking International Uniformity

The first sets of ICAO standards designed to produce uniform operation of international air transport services have been approved by the Council of the International Civil Aviation Organization, according to an announcement made by Dr. Edward Warner, President of the Council. Dr. Warner said that "these standards are now being sent to our 47 member nations for comment. I hope that subsequently they will be incorporated into the legislative codes of these nations and will be implemented in their territories."

The United States considers that an important advance has been made in international aviation with the adoption by the ICAO Council in Montreal of standards and recommended practices for personnel licensing, rules of the air, aeronautical maps and charts, dimensional practices and meteorological codes.

This appraisal by Rear Admiral Paul Smith, U. S. Representative on the ICAO Council, endorsed by the United States Government, was released by the Air Coordinating Committee, interdepartmental body which prepared the United States position during ICAO consideration of the standards. The ACC now will coordinate action by Federal agencies looking toward giving the standards effect in this country.

Dr. Warner outlined the five sets of standards as follows:

**Five Standards Listed.**—"Personnel licensing, which lays down the technical requirements and experience necessary for pilots and air crews flying on international routes; aeronautical maps and charts, which provide detailed specifications for the production of all types of maps and charts required in international flying, thus making sure that pilots and navigators will always be familiar with the maps which they are using, no matter where they may be.

"Rules of the air which include general flight rules, instrument flight rules, and right-of-way rules, and in general, are the equivalent of the rules of the road for ground motor vehicles; dimensional practices, providing for progressive measures to do away with the confusion caused by the use of both metric and foot-pound-second units in air-ground communications."

"Meteorological codes, which specify the various agreed systems used for the transmission of meteorological information. International standardization is both one of the most important tasks which faces ICAO and its greatest achievement to date. Safe and efficient operation of international air services can only be achieved by making sure that the procedures and regulations involved are uniform everywhere in the world, thereby eliminating any possible confusion or low standard of operation. But these standards we have devised must be kept up-to-date, and we shall do this by bringing together technical experts from over all the world to make any changes which become necessary because of technological advances."

Admiral Smith's full statement follows:

"The announcement by ICAO of adoption of the five sets of International Standards and Recommended Practices for Air Navigation marks a real achievement. The air-line operators of the world through the words of Sir William Hildred, Director General of the International Air Transport Association, feel that 'what we have to aim for is that a Venezuelan pilot flying an American plane making a bad weather approach to a Chinese airport where a Czech controller is operating a British landing aid device should feel as happy in the cockpit as a baby in the cradle.' This admittedly is a big order to the governments of the world in their efforts through the International Civil Aviation Organization. This announcement, however, provides at least for the international rules of the air; it provides for uniformity of licensing in

key positions in international operations; it provides for uniformity of aeronautical charts; it does much for the weather situation in standardizing codes; and it points the way to a possible answer to the most difficult problem of standardization of dimensional practices.

"The collective effort of hundreds of technicians from a score of countries have produced these standards. They form the base of a structure which promises to be satisfying not only to United States air carriers but also to all air passengers throughout the world. These standards will help to insure safety and regularity for international air travel, and this event can be entered in bold numerals on the credit side of the listing of investment and returns in international civil aviation."

**Technical Divisions Set Up.**—The ICAO international standards and recommended practices are provided for by the Convention of International Civil Aviation. The Chicago Conference of 1944, which drew up the Convention, instructed the Organization to prepare technical annexes which would serve as codes of uniform international air practices. When ICAO came into existence it set up technical divisions composed of experts from both member and non-member States. These divisions have met periodically to review the problems of their specialized branches of air navigation.

The reports of the divisional meetings, after approval by the experts in attendance and reference to the member States for comment, were reviewed and revised by the Air Navigation Committee. The work of that Committee was then reconsidered by the Council, which gave final approval to the standards, thereby affording them legal status as Technical Annexes to the Convention on International Civil Aviation.

Unless the majority of the member States disapprove of any of these standards, each one must be put into effect in each member's territory. Should any member State find itself unable to comply with any of these provisions, it must notify the Organization to this effect so that the air lines of all other member nations can be warned of the specific ways in which the air regulations of that State do not conform to the international standard.

## CAA Renting Planes For Official Flights

Provision has been made for the Civil Aeronautics Administration to rent light planes for official travel for the remainder of fiscal year 1948, it has been announced.

Permission has been granted in the current deficiency appropriation bill to use the money remaining in the aircraft maintenance and operation fund to provide rental aircraft for agents to use on their visits to the network of civilian airports in the United States. The CAA estimates that it costs \$25 an hour to operate the war surplus advanced training planes with which its agents now are equipped, and it believes it can save money by renting planes less expensive to operate.

Experiences in the sixth region on the west coast

## Plane a Useful Tool For Rancher Flying 32,000 Miles a Year

Flying daughter to school when the streams are too deep for her horse to ford, is just one of the many ways in which Gus Sherwin, owner of the 4W ranch near Newcastle, Wyoming, rolls up an average of 32,000 miles a year in his airplane.

Sherwin's use of the airplane is worth studying by every rancher, according to Civil Aeronautics Administration personal flying specialists.

Sherwin's ranch measures some 34,000 acres. He has five landing areas on it, one a Class 3 airport which he and his brother Paul built when they bought their first airplane seven years ago. This field is a mile from the house, and is bigger than they need anyhow, so they have one right near the house with a runway 3,500 feet long. Reading his log, however, indicates that Mr. Sherwin makes very many of his landings at points about the ranch far away from his "airports."

Trips to town account for most of his flying, but he visits neighbors, ferries people across swollen rivers, fetches the doctor for his family and neighbors, locates cows stuck in mudholes, shoots coyotes, and goes for the mail.

**Logs Every Flight.**—Sherwin has kept a log of every flight for six years. His first trip was dated September 19, 1942, and during that year he was a cautious pilot, only once using his plane for anything unusual. That time, he fed some cattle, according to his log. In 1943, however, when he made 51 flights worth logging, he appeared to feel more confident and find more uses for his plane. He "looked at pastures," "dropped note to Jim," "landed at Schmidt's to see bulls," and "brought out the doctor for Lana."

By this time, he was a confirmed flying farmer, and his 1944 log showed 78 flights of wide variety, mostly connected with the job of running a 34,000-acre ranch.

In 1945 he took a trip east as far as Glendale, W. Va., sort of a bus driver's vacation, it seems, and made 84 flights during the year, most of which were merely described as "4W to Newcastle and return," "4W to Lusk to Mitchell to Sterling and return."

He logged 103 flights in 1946 and he listed such activities as "drove horses into community pasture," "hunted the crazy man—landed in tall grease wood up to the belly of Cub. Looked over flood with Charlie. Ferried everyone across the river," and made several flights demonstrating the airplane. The Sherwins now are dealers for Bellanca aircraft.

have shown that these can be rented for considerably below \$12.50 an hour. An estimated \$75,000 is available for such rentals for the remainder of the year.

A fund of \$395,000 is in the next year's budget for maintenance and operation of aircraft, and this will be used to rent light planes in order to enable field workers to cover more of their itineraries in short time. A limited number of heavier planes will continue to be operated by CAA for specialized purposes, such as checking of air navigation facilities.

Regional administrators have been instructed that planes in only two categories will be rented: Planes with a payload of one pilot, one passenger and 40 pounds of baggage in category 1, and those carrying one pilot, two passengers and 120 pounds of baggage in category 2. They will be rented on the basis of bids submitted by operators. All maintenance and repair work will be done by contractors furnishing the aircraft. CAA representatives qualified to rent planes will carry identification cards.



## Accident Reports

**Collision Kills 2, Injures 1.**—An air collision at the Falls Church Air Park, Falls Church, Va., caused the death of pilot Ferdinand H. Kirchman and his passenger, Agnes L. Brady, and serious injury to solo student William Gleason Sauerwein. The probable cause of the collision, the CAB reports, was Kirchman's failure to avoid an overtaken aircraft, and Sauerwein's starting a take-off at a point from which he could not see incoming traffic. High trees, bordering both ends of the airport's single runway, which impair vision between aircraft landing and taking off, was given as a contributing factor.

Both aircraft were being flown locally. Sauerwein took off from the extreme east end of the runway after checking his engine and making a visual check for incoming traffic. He said that he saw none. At this time, Kirchman and his passenger were on final approach. For unknown reasons, their plane stopped its descent and continued ahead at an altitude of about 100 feet over the center of the runway without veering either way from the aircraft taking off. The two planes collided about two-thirds of the way down the 2,500-foot runway and plunged nearly vertically to the ground. Neither burned although both planes were demolished.

**Crashes After Striking Tree.**—Pilot John A. Sedgwick, 49, and Paul F. Cole, a revenue passenger, were killed when an aircraft crashed after striking a tree near Molino, Fla. The plane, owned by Dr. H. B. Dowling of Mobile, Ala., was demolished by the crash and subsequent fire.

The flight left Tallahassee, Fla., cleared by air traffic control on an instrument flight plan to Mobile, to cruise and maintain an altitude of 6,000 feet until further advised. Although position reports should have been made when passing Marianna and Crestview, Fla., no radio contacts were made with the flight following control tower contacts upon departing Tallahassee.

An aircraft, believed to have been the one piloted by Sedgwick, was observed circling the town of Flomaton, Fla., beneath an extremely low ceiling accompanied by fog, light rain, and darkness. Shortly thereafter the plane disappeared, headed in a southerly direction. About 15 minutes later, the plane piloted by Sedgwick crashed after striking a tall pine tree about 20 feet above the ground approximately 16 miles south of Flomaton.

At the time, weather in the vicinity of the accident was reported as: ceiling less than 500 feet, rain, light fog, and darkness. There were no known witnesses to the actual crash. However, statements of witnesses who saw the aircraft in flight, together with subsequent examination of the wreckage, failed to reveal any evidence of malfunctioning or mechanical failure of any part of the aircraft prior to the accident.

**Spin Ends in Crash.**—Private Pilot Paul E. Dahms and his passenger, George Thalberg, a commercial pilot, both of Baltimore, Md., were killed at Marley Park, Md., when the aircraft in which they were riding struck the ground after failing to recover from a spin. The plane, owned by G. A. Watkins, Jr., was demolished.

The plane departed Glen Burnie Airport, Glen Burnie, Md., with Pilot Dahms occupying the front seat and his passenger the rear. After climbing to an estimated altitude of 300 feet, a turn below traffic pattern limits was made to the left and a climb continued on this new heading until reaching an altitude of approximately 500 feet. At this point a steep climbing turn to the right was entered, which continued until a stall and subsequent spin to the left resulted. The spin was stopped after about three-

quarters of a turn, followed immediately by a spin to the right, from which recovery was not effected before striking the ground.

The control stick was not installed in the rear cockpit during this flight. There was no indication of malfunctioning of controls or any part of the aircraft prior to the crash.

**Snow Cause of EAL Accident.**—Loss of directional control on the runway due to excessive snow accumulation was given by the CAB as the probable cause of an accident to Eastern Air Lines' Flight 604 at Logan Airport, East Boston, Mass. Twenty passengers and the crew of five escaped uninjured in the crash and subsequent fire but five occupants were injured while evacuating the aircraft. The major portion of the aircraft structure was consumed by fire.

Flight 604 departed Miami, Fla., on an instrument flight rules clearance, nonstop to Newark, N. J. The flight to Philadelphia was entirely routine. During the latter portion of the flight the visibility at Newark lowered to one-half mile and the ceiling varied between 300 and 700 feet. Shortly after passing Philadelphia, the flight was given an air traffic control clearance to LaGuardia Field, which clearance was confirmed by the company dispatcher.

A position report of the flight over Freehold, N. J., was in error approximately 5 minutes, the CAB found. After having contacted LaGuardia approach control, the flight was cleared for a straight-in landing on Runway 4 but being considerably closer to the airport than the pilot believed, no approach was established. After passing the range station, the flight was cleared for an approach to Runway 22, but the aircraft returned to the range station and passed to the left of LaGuardia Field without establishing a landing approach.

While passing LaGuardia Field southwest-bound, the flight was advised that the ceiling at that station was reported as being 400 feet. An approach was established for Runway 4 but, the CAB found, the flight passed over LaGuardia Field at least one-half mile to the right of Runway 4 on a track from which a landing on that runway was not possible.

The flight informed approach control that the ceiling was not 500 feet at LaGuardia and requested the Boston weather. Clearance was obtained from both air traffic control and the company to proceed to Boston. The weather at both Boston and Providence, the alternate airports, was expected to be below alternate minimums during the following hours.

The flight to Boston was completed without incident and a clearance was obtained from Boston approach control for an ILS approach to the airport and a straight-in landing on Runway 4. Snowbanks between 4 and 6 feet in height lined the runway between 30 and 40 feet from the left edge, long narrow drifts of snow projected from the base of the bank approximately 20 feet into the cleared area of the runway and approximately one-half inch of newly fallen snow covered the runway, drifts, and snowbanks. The approach lights and high intensity lights were clearly visible during the approach.

Shortly after initial touchdown, approximately 2,000 feet from the approach end of the runway, the left landing gear struck snowdrifts on the left side of the runway which retarded the left wheels and caused the aircraft to skid to the left. The direction of motion changed suddenly, causing the aircraft to crash into the left snowbank, resulting in failure of the right landing gear and nose gear. Fire broke out in the vicinity of the No. 3 and No. 4 engines and soon spread inboard to the fuselage. Five of the aircraft occupants were injured in jumping from the rear cabin exit, which was approximately 15 feet above the ground. No emergency evacuation equipment was used.

## Civil Aeronautics Board

"Despite the fact that the conduct of the passengers and the crew during the evacuation was orderly and no panic was noted, this accident forcibly points toward the necessity for the development of more suitable passenger evacuation facilities," the Board stated.

**Crash Follows Air Collision.**—Walter W. Hyde, a private pilot, and Joanne Brouse, a passenger, were killed when they crashed out of control following an air collision between the plane in which they were flying and an Army plane. Capt. L. R. Lockwood, pilot of the Army plane, returned to and landed safely at the Clinton County Army Airfield, Wilmington, Ohio.

Pilot Hyde and his passenger were en route to Gary, Ind., from Wellington, Ohio. Captain Lockwood, accompanied by Mechanic Gunner Adolph Rippe and Lt. Gerhardt H. Weber, was on a navigational proficiency flight from the Clinton County Army Airfield to Lansing, Mich.

At a point about 5 miles southeast of Wauseon, Ohio, the two planes collided at an altitude of approximately 1,600 feet above the ground, while Pilot Hyde was heading in a westerly direction at an estimated 80 miles per hour and the Army plane in a northerly direction at 225 miles per hour. According to witnesses, Hyde's plane was banked sharply to the right immediately prior to impact, apparently in an attempt to avoid collision. Captain Lockwood stated that he did not see the other plane at any time. The Army plane was on automatic pilot when the collision occurred.

Evidence indicated that initial contact was between the nose and canopy of the Army plane and the tail of the other aircraft, following which the Army plane's left propeller cut through the fuselage and severed about 6 feet of the other plane's right wing and aileron. The tail wheel, spring and fitting from Hyde's plane were found in the cockpit of the Army plane. At the time and place of collision, the weather was reported to be: Ceiling about 2,000 feet, visibility more than 3 miles.

**Plane Hits Mountain Ridge.**—Continuation of the flight into instrument weather conditions over mountainous terrain at an altitude too low to clear the mountains en route, was held by the Civil Aeronautics Board as the probable cause of an accident resulting in the death of three persons when an airplane was destroyed in a crash into a ridge of the Blue Bell Knoll Mountain near Hanksville, Utah.

The occupants were Marvin George Vaughan, captain; Robert F. Humes, first officer; and Herbert V. Preeg, a nonrevenue passenger.

The airplane, owned and operated by Slick Airways, Inc., a noncertificated air freight carrier, was en route from Willow Run Airport, Ypsilanti, Mich., to Burbank, Calif. The first scheduled stop was at Denver, Colo., where the crew was changed. Captain Vaughan and First Officer Humes took over. From Denver, the flight proceeded normally, reporting over the Eagle radio range station at 14,000 feet. Over the Grand Junction radio range station, they stated they were at 12,000 feet and descending to 10,000 feet.

Over Hanksville, they stated they were at 10,000 feet. This transmission came in loud and clear, with no indication that any mechanical trouble was being experienced. Approximately 12 minutes later the aircraft crashed into a ridge of the mountain. The wreckage was located 100 feet below the mountain ridge at an elevation slightly over 10,000 feet.

The airplane had been loaded within its allowable limits; and the aircraft records examined showed that it had been properly maintained, and was in an airworthy condition during the time of this flight.

CIVIL AERONAUTICS JOURNAL

## Income Reports Show Fourth Quarter's Losses By 16 Domestic Lines

The Civil Aeronautics Board has announced that for the fourth quarter of 1947, reports filed by the 16 domestic trunk air lines indicate a net loss from operations of \$10,471,348 as compared with net operating loss of \$9,794,264 for the same period in 1946.

Additional figures covering operating revenues and expenses for the fourth quarter ending December 31, 1947, and December 31, 1946, follow:

	3 months ending	
	Dec. 31, 1947	Dec. 31, 1946
Revenue miles flown.....	77,252,871	79,671,933
Operating revenue:		
Passenger.....	\$75,131,588	\$69,181,531
Mail.....	6,550,487	6,446,503
Express.....	2,737,220	3,492,910
Freight.....	3,174,736	1,828,233
All other.....	1,759,111	2,107,939
Total.....	89,353,172	83,057,119
Operating expenses.....	99,821,520	92,851,383
Net operating income.....	-10,471,348	-9,794,264

For the year ending December 31, 1947, the net operating loss for the 16 domestic trunk air lines was \$20,900,102 as compared with the net operating loss of \$5,621,832 for the year ending December 31, 1946. Additional figures covering operating revenues and expenses for the years ending December 31, 1947, and December 31, 1946, follow:

	12 months ending	
	Dec. 31, 1947	Dec. 31, 1946
Revenue miles flown.....	311,879,430	304,544,012
Operating revenue:		
Passenger.....	\$303,193,782	\$272,573,483
Mail.....	23,325,630	19,880,164
Express.....	10,530,408	9,185,338
Freight.....	8,357,837	4,084,575
All other.....	7,082,710	5,776,089
Total.....	352,490,367	311,499,649
Operating expenses.....	373,390,469	317,121,481
Net operating income.....	-20,900,102	-5,621,832

## More Private Fliers Use Two-way Radio Equipment

Although production of personal planes in 1947 was less than half the production in 1946, the number equipped with two-way radio at the factory more than doubled.

This emphasis on radio equipment, according to the Civil Aeronautics Administration, is one indication of the increased use by personal fliers of the airways facilities. Lack of complete statistics has made it impossible to determine just how much private fliers use the airways aids in comparison to the scheduled and nonscheduled commercial pilots.

The number of non-air-carrier aircraft equipped with radio has risen steadily since 1945, the CAA said. These are the figures:

June 30, 1945.....	2,668
Dec. 31, 1945.....	2,783
June 30, 1946.....	4,493
Dec. 31, 1946.....	11,573
June 30, 1947.....	13,669
Dec. 31, 1947.....	18,159

The number of personal aircraft sold dropped from 34,568 in 1946 to 15,338 in 1947. Less than 9 percent of those sold in 1946 were equipped with two-way radio at the factory, but in 1947, 45 percent of those built were so equipped, the figures being 3,065 for 1946 and 6,908 in 1947.

The shift noticeable in 1947 from two-place to four-place planes had some effect, CAA officials believe, in the number of radio-equipped planes manufactured, since owners of these larger planes more often buy radios than the owners of smaller planes.

## Russell Adams Sworn in As a Member of CAB

Russell B. Adams was sworn in May 13 as a member of the Civil Aeronautics Board by the Honorable Jesse M. Donaldson, Postmaster General of the United States. Mr. Adams was appointed to serve as member of the Board until the end of 1950, succeeding Harllee Branch, who resigned on May 1, before completing his full term of office.

Mr. Adams has been Director of the Board's Economic Bureau since August 1945, and has served as Assistant Director and in analytical positions in that Bureau since 1939.

He left for Geneva, Switzerland, late in May as chairman designee of the United States delegation of the Second Assembly of the International Civil Aviation Organization. Mr. Adams attended the first conference of this organization in Chicago in 1944 as technical adviser to the United States delegation, and has attended other conferences in Montreal and Geneva as a member of the American delegation.

He also represents the Civil Aeronautics Board on the Air Coordinating Committee as Chairman of its Economic Division, and in several other capacities.

In 1930 Mr. Adams entered Government service with the Post Office Department. He became a post-office inspector in January 1936, and was affiliated with the Office of the Chief Inspector until his appointment to the Board in 1939.

Mr. Adams is a Democrat. He was born at Wheeling, W. Va., on December 28, 1910, is married, and has four children.

Mr. Branch, who announced his resignation several months ago, became a member of the Civil Aeronautics Board upon its organization in August 1938, and was Vice Chairman of the Board from that date until July 1940, when he was appointed Chairman. He served as Chairman from July 1940 to December 31, 1941. In January 1945 he was reappointed for a second 6-year term as a member of the Board.

## Awards Sought for Two CAA Employees

Two Civil Aeronautics Administration communicators have been recommended for salary increases for their work in helping to locate the wreckage of an air-line plane which crashed on the night of March 12 against 16,000-foot high Mount Sanford, Alaska.

The CAA employees—Maurice Benningfield and Layton A. Bennett—are two men out of scores who maintain a lonely vigil in the rugged, almost inaccessible areas of Alaska. Their normal duties include providing weather data to the planes along the airways overhead, and reporting on their progress for traffic control purposes.

Benningfield, on duty at the Gulkana station on the night of the accident, saw a red glow in the sky to the northeast. He immediately alerted other CAA stations, all of which attempted unsuccessfully to contact the air liner known to be flying in the area.

**Crude Method Effective.**—Then Benningfield, using a crude but effective method of taking a bearing on the flames, measured the exact angle with a pencil supported against a door jamb. This enabled a CAA pilot to find the wreckage in less than an hour the next morning. Since the wreckage fell 2,000 feet into a cup-shaped glacier head, and was covered with snow during the night, it probably never would have been located without Benningfield's measurements.

On the same night, Bennett, a CAA communicator,

## Vacancies Are Filled By New Appointments To Advisory Committee

Six new members of the Civil Aeronautics Administration's Non-Scheduled Flying Advisory Committee were named last month to meet with the committee at its session in Washington, June 15.

Replacing five members whose terms have expired and one who is deceased, four of the new men represent the private fliers of their communities. They are Leighton Collins, editor of Air Facts, New York, who represents the First Region of the CAA, including New England and Atlantic States; Harold Wood, automobile dealer of Birmingham, Ala., representing nonscheduled fliers of the Second Region, consisting of Southeastern States; Henry Von Berg, president and operator of the Pathfinder Flying Service at Stockton, Calif., Sixth Region, consisting of Southwestern and Western States; and Harvey L. Casebeer, M. D., president of the Chamber of Commerce of Butte, Mont., Seventh Region, consisting of western and Northwestern States.

Joseph B. Hartranft, Jr., General Manager of the Aircraft Owners and Pilots Association of Washington, D. C., will represent aircraft owners and pilots and Lynn Bollinger, head of Harvard University's Aeronautical Research Foundation, Boston, will represent technicians.

**Each a Private Flier.**—Each of the new members is an enthusiastic private flier, and has had many years of experience in the aviation business. Collins' magazine is read widely by pilots, to whom most of his material is angled, and Hartranft's association has several thousand members from all over the country. Dr. Casebeer has been flying since 1927, uses his two airplanes to get about the State in his work as a specialist, and is president of the 1,000-member Montana pilots' organization in his State. Bollinger's work in aviation research, especially on noise reduction and economics, has attracted wide attention in the industry. Wood is a member of the Alabama State Aviation Commission and widely known throughout the Southeast. Von Berg is considered as one of the best operators of a fixed base aviation operation in the West. Each will serve for 2 years.

"Addition of these men gives us a very strong committee," F. B. Lee, Deputy Administrator, said. "We have a very wide representation of the flying activity in the country, and we believe the advice of these members to the Administrator will continue the benefits which the CAA and nonscheduled flying have enjoyed from this committee heretofore."

Other members of the present committee are William L. Anderson, Pennsylvania; O. L. Parks, Missouri; F. L. Marsden, New York; William H. Klenke, Michigan; George E. Haddaway, Texas; and Chairman Don C. Flower, Kansas.

Retiring members of the committee who served 2 years are William A. Mara, Detroit, who represented the Third Region; Harry Playford, Miami, Second Region; Fred E. Weick, Riverdale, Md., who represented technicians; and E. Williamson, Seattle, who represented the Seventh Region. Richard H. Depew, Jr., who represented the First Region, died recently during his term of office.

who owns a small single-engine aircraft, made a hazardous flight over treacherous mountain terrain in an effort to find the wreckage. Bright, shifting curtains of Northern Lights prevented his finding the wreckage in the darkness, and he was forced to return to the airfield after the flight in subzero weather.

# Regulations

Amdt. 20-9. . . . . Effective June 22, 1948

The Civil Aeronautics Board hereby amends Part 20 of the Civil Air Regulations:

1. By amending § 20.56 to read as follows:  
**20.56 Military competence.** Certificates granted on the basis of military competence shall be issued under the following conditions:

2. By rescinding § 20.560.

3. By amending § 20.561 to read as follows:

**20.561 Private pilot rating.** An applicant for a pilot certificate with a private pilot rating on the basis of military competence shall be deemed to have met the aeronautical knowledge, experience, and skill requirements of the Civil Air Regulations for the issuance of such certificate, if he passes a written examination on Parts 43 and 60 of the Civil Air Regulations and presents reliable documentary evidence showing:

(a) That he is a member of the armed forces of the United States or a civilian employee of the ferry or transport services of such forces, and is on solo flying status as a rated pilot or the equivalent, or

(b) That he has been honorably discharged or released from such forces and has had at least 10 hours of solo flying in military aircraft within the preceding 12 calendar months.

4. By adding §§ 20.562 through 20.564 to read as follows:

**20.562 Commercial pilot rating.** An applicant for a pilot certificate with a commercial pilot rating on the basis of military competence shall be deemed to have met the aeronautical knowledge, experience, and skill requirements of the Civil Air Regulations for the issuance of such certificate, if he passes a written examination on Parts 43 and 60 of the Civil Air Regulations and presents reliable documentary evidence showing:

(a) That he is a member of the armed forces of the United States or a civilian employee of the ferry or transport services of such forces and that he has been on active duty on solo flying status as a rated pilot or the equivalent for a period of at least 6 consecutive months immediately preceding application, or

(b) That he has been honorably discharged or released from such forces and has been on active duty of the type specified in (a) above for a period of at least 6 consecutive months within 18 months immediately preceding application.

**20.563 Aircraft type and class rating.** Aircraft type and class ratings will be issued with a pilot certificate issued on the basis of military competence, or with an effective pilot certificate, to an applicant who presents reliable documentary evidence showing that within the preceding 12 months he has had at least 10 hours of flying time in military aircraft during which time he was the first pilot or the sole manipulator of the controls of an aircraft of the type and class for which a rating is sought.

**20.564 Instrument rating.** An instrument rating will be issued to an applicant who holds a currently effective military instrument rating, if the requirements for the issuance of such a rating and the privileges authorized by it are not less than those of the Civil Air Regulations with respect to such rating.

Amdt. 22-3. . . . . Effective June 22, 1948

The Civil Aeronautics Board hereby amends Part 22 of the Civil Air Regulations:

1. By amending § 22.118 to read as follows:

**22.118 Military competence.** An applicant for a private lighter-than-air pilot certificate on the basis of military competence shall be deemed to have met the aeronautical knowledge, experience, and skill requirements of the Civil Air Regulations for the issuance of such certificate, if he passes a written examination on Parts 43 and 60 of the Civil Air Regulations and presents reliable documentary evidence showing:

(a) That he is a member of the armed forces of the United States or a civilian employee of the ferry or transport services of such forces, and is on solo flying status as a rated lighter-than-air pilot or the equivalent, or

(b) That he has been honorably discharged or released from such forces and has had at least 10 hours as sole manipulator of the controls of a military lighter-than-air aircraft within the preceding 12 months.

2. By amending § 22.129 to read as follows:

**22.129 Military competence.** An applicant for a commercial lighter-than-air pilot certificate on the basis of military competence shall be deemed to have met the aeronautical knowledge, experience, and skill requirements of the Civil Air Regulations for the issuance of such certificate, if he passes a written examination on Parts 43 and 60 of the Civil Air Regulations and presents reliable documentary evidence showing:

(a) That he is a member of the armed forces of the United States and that he has been on active duty on solo flying status as a rated lighter-than-air pilot with unlimited instrument privileges for a period of at least 6 consecutive months immediately preceding application, or

(b) That he has been honorably discharged or released from such forces and has been on active duty of the type specified in (a) above for a period of at least 6 consecutive months within 18 months immediately preceding application.

Amdt. 35-1. . . . . Effective May 10, 1948

The Civil Aeronautics Board hereby amends Part 35 of the Civil Air Regulations:

1. By amending § 35.06 to read as follows:

**35.06 Knowledge.** Applicant shall pass a written examination on the following subjects pertaining to aircraft having four or more engines and certificated in the transport category or to aircraft having four or more engines and incorporating a flight engineer station:

(a) Responsibilities and limitations of a flight engineer as specified in the Civil Air Regulations; (b) Theory of flight and elementary aerodynamics; (c) Aircraft performance and aircraft engine operation with respect to limitations; (d) Mathematical computations of engine operation and fuel consumption, including basic meteorology with respect to engine operations; (e) Aircraft loading and center of gravity computations; (f) Basic aircraft maintenance and operating procedures.

2. By amending § 35.07 to read as follows:

**35.07 Skill.** Applicant shall pass a practical test on the duties of a flight engineer during flight on an aircraft having four or more engines and certificated in the transport category or on an aircraft having four or more engines and incorporating a flight

engineer station; and shall demonstrate competency with respect to:

(a) Normal duties and procedures relating to aircraft, aircraft engines, propellers, and appliances; (b) Recognition of the malfunctioning of aircraft, aircraft engines, propellers, and appliances, and the taking of appropriate action thereon; (c) Emergency duties and procedures relating to aircraft, aircraft engines, propellers, and appliances.

3. By adding a new § 35.08 to read as follows:

**35.08 Limited certificate.** (a) An applicant may be certificated as a flight engineer for an aircraft having less than four engines: *Provided*, That (1) the design of the aircraft incorporates a flight engineer station satisfactory to the Administrator, (2) the applicant meets the requirements of §§ 35.00 through 35.05, and (3) the applicant passes written and practical examinations respecting such aircraft on the subjects listed in §§ 35.06 and 35.07. (b) A certificate issued under the provisions of this section shall contain an appropriate limitation which may be removed at such time as the holder of the certificate passes the written and practical tests prescribed in §§ 35.06 and 35.07.

Amdt. 41-21. . . . . Effective May 19, 1948

The Civil Aeronautics Board hereby changes the effective date of Amendment 41-20 of Part 41 of the Civil Air Regulations from May 20, 1948, to July 19, 1948.

Amdt. 42-10. . . . . Effective May 19, 1948

The Civil Aeronautics Board hereby changes the effective date of Amendment 42-9 of Part 42 of the Civil Air Regulations from May 20, 1948, to July 19, 1948.

Amdt. 61-19. . . . . Effective May 19, 1948

The Civil Aeronautics Board hereby changes the effective date of Amendment 61-18 of Part 61 of the Civil Air Regulations from May 20, 1948, to July 19, 1948.

SR-320. . . . . Effective Apr. 29, 1948

The Civil Aeronautics Board hereby rescinds SR-319 which required that an absolute terrain proximity indicator be installed on all scheduled aircraft carrying passengers during the hours of darkness or under instrument flight rule conditions by May 15, 1948.

SR-321. . . . . Effective May 18, 1948

The Civil Aeronautics Board hereby rescinds Serial Civil Air Regulations Serial Numbers 96, 177, 182, 198, 199, 205, 217, 218, 219, 228, 233, 237, 264, 273, 276, 282, 292, 297, 299, 300, 301, 302, 309, 310, 312, 315, 317, 321, 324, 330, 332, and 395.

**Note:** The following Special Civil Air Regulations are presently effective: Serial Numbers 188, 340, 340-D, 361-A, 361-D, 396, 397, 397-A, 398, SR-317, and SR-320.

## Airline Orders

E-1278 institutes a proceeding to determine whether Pan American Airways, Northwest and Pacific Northern Airlines are providing adequate service between points in the U. S. and the Territory of Alaska (Mar. 9).

E-1279 denies motion of Delta Air Lines, requesting that the Board stay its decision and order No. E-1156, insofar as it authorizes extension of route 55 in the Boston-New York-Atlanta-New Orleans Case (Mar. 10).

E-1280 approves agreements relating to standard communication procedures, between certain air carriers, as members of the Air Traffic Conference of America (Mar. 10).

E-1281 orders Continental Charters to show cause why letter of registration 621 should not be suspended during the pendency of this proceeding, and why the Board should not issue to it an order to cease and desist from violation of the Act and requirements thereunder (Mar. 11).

E-1282 approves agreement between certain air carriers and foreign air carriers, relating to performance of certain services at LaGuardia Field (Mar. 12).

E-1283 authorizes Pan American Airways to suspend service for one year at Washington, D. C., as a co-terminal on its North Atlantic route (Mar. 12).

E-1284 denies petitions of Air Line Pilots Assn. International and International Assn. of Machinists for reconsideration of denial to intervene and requests for other related relief, re temporary mail rate for National Airlines (Mar. 12).

E-1285 grants petition of Pan American Airways to intervene in the application of British Caribbean Airways (Mar. 15).

E-1286 dismisses applications of Chicago and Southern Air Lines (Mar. 15).

E-1287 dismisses application of Thomas Wayne Hancock, for want of prosecution (Mar. 15).

E-1288 grants Aerline Eireann Teoranta permission to serve Boston, Mass., and New York, N. Y., on Mar. 17, 1948, through the use of Logan Airport and LaGuardia Airport, respectively (Mar. 15).

E-1289 approves change in "Approved Service Plan—Foreign Air Transportation" of American Overseas Airlines, Inc., issued Mar. 1, 1946, so as to substitute Shannon, Ireland, in lieu of Foynes, Eire, and to authorize applicant to serve Bremen-Hamburg, Germany, and Cologne-Dusseldorf, Germany (Mar. 15).

E-1290 severs certain portions of Eastern Air Lines' application from Docket 3043 and assigns them to Docket 3282; consolidates applications of TWA, American, and EAL, into one proceeding (Mar. 15).

E-1291 denies joint motion of Chicago and Southern Air Lines and Braniff Airways, requesting that the Board order the examiner in the Chicago-Houston Service Case to certify the entire record to the Board for initial decision (Mar. 16).

E-1292 denies petition of National Airlines for reconsideration of amended foreign air carrier permit of Linea Aeropostal Venezolana, insofar as the order authorizes Linea Aeropostal Venezolana to engage in foreign air transportation between Havana, Cuba, and New York, N. Y. (Mar. 16).

E-1293 dismisses applications of certain parties and various railroads, for approval of interlocking relationships (Mar. 17).

E-1294 dismisses applications of certain parties and airlines, and Air Navigation Traffic Control Research, for approval of interlocking relationships (Mar. 17).

E-1295 approves agreement between Braniff Airways and Pioneer Air Lines, relating to lease of space (Mar. 17).

E-1296 grants St. Croix Chamber of Commerce leave to intervene in the Caribbean Area Case (Mar. 18).

E-1297 dismisses application of Smith Flying Service, for want of prosecution (Mar. 18).

E-1298 approves cancellation of agreement between Western Air Lines and J. W. Milne Transfer & Storage Co., relating to air-conditioning service (Mar. 18).

E-1299 through 1302 approves agreements between certain air carriers, relating to air-conditioning service (Mar. 18).

E-1303 approves agreement between American Airlines and Dixie Air Associates, relating to the use of trainer equipment (Mar. 18).

E-1304 approves agreement between certain air carriers, relating to operations at the Kansas City Municipal Airport (Mar. 18).

E-1305 approves agreement between Continental Air Lines and Slick Airways, relating to the use of a Link Trainer (Mar. 18).

E-1306 approves agreement between American Airlines and Mid-Continent Airlines, relating to lease of space (Mar. 18).

E-1307 approves agreement between American Airlines, Western Air Lines and Consolidated Vultee Aircraft, relating to lease of space (Mar. 18).

E-1308 approves agreement between United Air Lines and Eastern Air Lines relating to lease of space.

E-1309 amends foreign air carrier permit of Trans-Canada Air Lines, so as to substitute St. John, N. B., Canada, in lieu of Blissville, N. B., Canada, as an intermediate point on route between Halifax, N. S., Canada and Boston, Mass. (Issued with an opinion—Feb. 13.)

E-1310 institutes an investigation into certain tariff rules filed by a number of carriers providing for free or reduced-rate transportation for various classes of persons (Mar. 18).

E-1311 denies petition of American Airlines for severance of the suspension dockets in the Air Freight Rate Investigation (Mar. 19).

E-1312 grants Continental Air Lines permission to serve Lawton-Fort Sill, Okla., on April 1, through the use of Post Field (Mar. 22).



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# Scheduled Air Carrier Operations

Source: CAB Form 41

## Domestic Trunk Lines—March 1948

Operator	Revenue miles	Revenue passengers (unduplicated)	Revenue passenger-miles (000)	Express and freight (tons)	Ton-miles flown		Passenger seat-miles (000)	Revenue passenger load factor (percent)
					Express	Freight		
American Airlines, Inc.	4,010,216	178,846	83,177	3,919.0	446,994	1,623,734	141,083	58.96
Braniff Airways, Inc.	913,928	12,784	14,512	300.0	66,118	91,534	28,144	51.56
Chicago & Southern Air Lines, Inc.	563,818	20,964	8,155	243.0	52,395	43,756	14,931	54.62
Colonial Airlines, Inc.	200,845	9,144	2,586	27.5	4,094	2,654	4,208	61.45
Continental Air Lines, Inc.	428,851	11,328	4,110	56.0	8,016	17,871	8,835	46.52
Delta Air Lines, Inc.	1,165,933	37,909	16,186	394.0	78,028	117,851	32,093	50.43
Eastern Air Lines, Inc.	4,488,575	181,785	105,071	1,218.4	332,442	465,714	150,281	66.38
Inland Air Lines, Inc.	196,790	5,475	1,958	24.0	3,942	5,934	3,835	51.06
Mid-Continent Airlines, Inc.	619,289	22,792	6,861	102.0	14,389	19,997	12,299	55.79
National Airlines, Inc.	187,912	6,291	3,931	173.0	67,594	99,050	7,736	50.81
Northeast Airlines, Inc.	236,351	18,579	3,477	112.8	8,814	9,065	8,215	42.17
Northwest Airlines, Inc.	1,212,428	41,367	20,951	399.8	130,089	125,884	40,400	51.86
Pennsylvania-Central Airlines Corp.	1,215,933	72,742	18,543	1,273.0	166,033	324,618	37,866	48.97
Transcontinental & Western Air, Inc.	4,303,848	86,930	64,834	1,442.0	479,940	747,834	109,780	59.06
United Air Lines, Inc.	4,497,417	122,362	68,642	2,839.0	641,950	1,555,863	109,831	62.47
Western Air Lines, Inc.	517,097	21,641	8,192	219.0	23,806	71,177	15,539	52.72
Total	21,819,261	880,939	431,156	12,792.5	2,494,674	5,322,576	733,106	58.81

## Domestic Trunk Lines—January-March 1948

Operator	Revenue miles January-March		Revenue passengers (unduplicated) January-March		Revenue passenger-miles (000) January-March		Express and freight (tons) January-March	
	1948	1947	1948	1947	1948	1947	1948	1947
	1948	1947	1948	1947	1948	1947	1948	1947
American Airlines, Inc.	11,086,340	13,744,540	462,528	530,727	224,451	275,455	10,722.0	5,621.0
Braniff Airways, Inc.	2,517,958	2,558,884	112,404	123,421	39,864	43,605	875.0	605.0
Chicago & Southern Air Lines, Inc.	1,511,807	1,602,879	52,969	58,736	21,323	23,191	685.0	476.0
Colonial Air Lines, Inc.	552,867	554,490	23,604	22,660	6,687	6,535	70.1	52.4
Continental Air Lines, Inc.	1,203,814	1,125,435	30,724	36,315	11,206	12,006	140.0	103.0
Delta Air Lines, Inc.	3,170,971	2,686,242	99,040	107,191	43,790	51,667	1,098.0	592.0
Eastern Air Lines, Inc.	12,402,072	10,815,893	466,083	383,074	275,536	230,759	3,301.8	2,099.6
Inland Air Lines, Inc.	567,712	446,347	15,366	16,561	5,598	4,420	55.0	24.8
Mid-Continent Airlines, Inc.	1,651,803	1,273,938	60,910	53,102	18,217	16,366	268.0	115.1
National Airlines, Inc.	907,817	2,401,703	30,028	78,705	16,194	47,181	456.1	323.2
Northeast Airlines, Inc.	690,276	888,595	47,876	67,380	8,925	12,668	392.6	190.9
Northwest Airlines, Inc.	3,420,792	4,170,843	110,422	127,265	57,151	63,454	1,147.6	781.3
Pennsylvania-Central Airlines Corp.	3,450,561	3,541,334	186,602	201,095	48,121	50,364	3,740.0	2,951.0
Transcontinental & Western Air, Inc.	12,160,275	9,995,928	234,769	181,492	183,186	138,557	3,964.0	2,410.0
United Air Lines, Inc.	12,674,537	12,800,475	331,664	354,948	198,616	217,531	7,662.0	4,154.0
Western Air Lines, Inc.	1,472,774	1,870,441	61,953	101,249	23,859	38,596	551.0	500.9
Total	69,141,406	70,477,877	2,326,912	2,443,924	1,174,727	1,232,375	35,128.2	21,033.2
Index (1947=100)	98.53	100.00	95.21	100.00	95.32	100.00	167.01	100.00

Operator	Ton-miles flown				Passenger seat-miles (000) January-March		Revenue passenger load factor (percent) January-March	
	Express January-March		Freight January-March		1948	1947	1948	1947
	1948	1947	1948	1947	1948	1947	1948	1947
American Airlines, Inc.	1,272,080	1,187,379	4,107,072	1,766,785	388,572	427,780	57.76	64.39
Braniff Airways, Inc.	212,370	192,442	250,786	60,292	77,878	72,768	31.19	59.92
Chicago & Southern Air Lines, Inc.	152,118	149,930	115,638	44,305	39,958	41,638	53.36	55.70
Colonial Air Lines, Inc.	11,962	11,142	5,416	0	11,589	10,828	57.70	60.35
Continental Air Lines, Inc.	22,730	20,091	43,739	26,878	24,802	23,180	45.18	51.79
Delta Air Lines, Inc.	219,903	181,187	339,492	121,458	90,049	78,807	48.63	65.56
Eastern Air Lines, Inc.	1,015,439	964,019	1,124,009	311,819	443,462	334,239	62.13	69.04
Inland Air Lines, Inc.	10,989	5,168	11,154	2,410	10,911	8,526	51.31	51.84
Mid-Continent Airlines, Inc.	11,934	29,815	47,289	10,487	32,573	25,659	55.93	63.78
National Airlines, Inc.	145,216	73,193	254,201	197,352	31,467	68,611	51.46	68.77
Northeast Airlines, Inc.	25,794	26,952	28,734	1,939	22,785	28,987	39.17	43.70
Northwest Airlines, Inc.	393,209	378,947	300,068	95,475	109,779	112,625	52.06	56.34
Pennsylvania-Central Airlines Corp.	490,671	542,739	946,541	389,956	105,461	115,457	45.63	43.62
Transcontinental & Western Air, Inc.	1,417,765	1,301,926	2,046,727	804,343	314,285	231,900	58.29	59.75
United Air Lines, Inc.	1,719,594	1,544,409	3,834,770	1,894,579	313,288	313,113	60.84	69.48
Western Air Lines, Inc.	65,329	109,126	162,885	94,202	46,813	69,292	50.97	55.70
Total	7,247,103	6,718,465	13,618,521	5,825,280	2,063,672	1,963,410	56.92	62.77
Index (1947=100)	107.87	100.00	233.78	100.00	105.11	100.00	90.68	100.00

Passenger-miles flown (total revenue and nonrevenue, in thousands): January—406,599; February—364,344; March—447,405; Total—1,218,348.

## Domestic Territorial Lines—March 1948

Operator	Revenue miles	Revenue passengers (unduplicated)	Revenue passenger-miles (000)	Express and freight (tons)	Ton-miles flown		Passenger seat-miles (000)	Revenue passenger load factor (percent)
					Express	Freight		
Caribbean-Atlantic Airlines, Inc.	33,729	6,926	435	7.0	0	475	837	51.97
Hawaiian Airlines, Ltd.	243,819	26,776	3,755	406.0	11,421	48,541	5,342	70.29
Total	277,548	33,702	4,190	413.0	11,421	49,016	6,179	67.81



# Scheduled Air Carrier Operations—Concluded

## Domestic Feeder Lines—March 1948

Operator	Revenue miles	Revenue passengers (unduplicated)	Revenue passenger-miles (000)	Express and freight (tons)	Ton-miles flown		Passenger seat-miles (000)	Revenue passenger load factor (percent)
					Express	Freight		
All American Aviation, Inc.	150,659	0	0	17.9	2,475	0	0	—
Challenger Airlines Co.	97,914	1,021	248	15.0	1,103	3,065	2,057	12.06
Empire Air Lines, Inc.	83,203	1,378	308	3.0	630	0	1,434	21.48
Florida Airways, Inc.	66,908	923	127	3.1	325	0	511	24.85
Los Angeles Airways, Inc.	20,039	0	0	0.0	0	0	0	—
Monarch Air Lines, Inc.	109,964	1,254	283	24.0	709	4,012	1,980	14.29
Piedmont Aviation, Inc.	46,956	838	216	1.5	242	171	986	21.91
Pioneer Air Lines, Inc.	223,851	6,203	1,628	10.0	1,401	1,685	5,373	30.30
Southwest Airways Co.	164,422	5,431	1,035	49.0	2,023	7,565	3,184	32.51
Trans-Texas Airways	119,711	991	213	3.0	269	417	2,582	8.25
West Coast Airlines, Inc.	102,508	5,774	647	8.3	813	0	1,932	33.49
Wisconsin Central Airlines, Inc.	46,120	320	55	4.2	553	0	393	13.99
Total	1,232,276	24,133	4,769	139.0	10,543	16,915	20,432	23.30

## International and Overseas Air Carriers—February 1948

Operator	Revenue miles	Revenue passengers (unduplicated)	Revenue passenger-miles (000)	Express and freight (tons)	Ton-miles flown		Passenger seat-miles (000)	Revenue passenger load factor (percent)
					Express	Freight		
American Airlines, Inc.	172,217	4,049	3,417	162.0	0	109,206	5,930	57.62
American Overseas Airlines, Inc.	456,471	2,298	6,281	47.4	152,535	0	17,206	36.50
Chicago & Southern Air Lines, Inc.	38,360	1,060	726	13.0	0	8,567	1,726	42.06
Colonial Airlines, Inc.	54,750	1,436	1,142	1.2	0	906	2,399	47.60
Eastern Air Lines, Inc.	60,320	1,185	1,232	14.2	0	22,446	3,370	36.56
National Airlines, Inc.	6,288	345	98	12.6	3,105	0	289	33.91
Northwest Airlines, Inc.	320,575	1,800	3,809	24.0	3,291	57,970	7,777	48.98
Pan American Airways, Inc.:								
Atlantic Division	867,792	6,319	14,264	107.3	396,826	0	26,315	54.20
Latin American Division	2,273,077	62,669	43,757	1,050.0	1,365,935	0	84,382	51.86
Alaska Operations	180,621	1,768	1,879	89.0	126,290	0	5,379	34.93
Pacific Operations	1,114,138	6,032	18,094	77.0	256,295	0	27,503	65.79
Pan American-Grace Airways, Inc.	449,978	7,696	8,136	174.0	109,729	1,468	13,501	60.26
Transcontinental & Western Air, Inc.	785,780	3,902	11,851	53.0	221,290	0	25,665	46.18
United Air Lines, Inc.	139,200	861	2,066	4.0	9,910	0	4,375	47.22
Uruba, Medellin & Central Airways, Inc.	13,960	245	82	10.0	3,251	0	236	34.75
Total	6,933,527	101,665	116,834	1,838.7	2,648,457	200,563	226,053	51.68

## Official Actions . . . Civil Aeronautics Board

(Continued from Page 67)

portation between Buffalo, N. Y., Airport or the Niagara Falls, N. Y. Airport, on the one hand, and points in Canada (Apr. 2).

E-1342 terminates proceeding regarding amended certificate of Chicago and Southern Air Lines, authorizing service over its Latin American route (Apr. 2).

E-1343 denies certain petitions for issuance of a regulation granting temporary operating authority to indirect air carriers; states that amendment of the Economic Regulations, proposed in Draft Release 22, will not be adopted (Apr. 2).

E-1344 denies application of Railway Express Agency for an exemption from the provisions of the Act so as to engage as an indirect air carrier in air transportation by mutually satisfactory arrangements with non-certificated cargo carriers operating under sec. 292.5 of the Economic Regulations (Apr. 2).

E-1345 denies second petition of United Air Lines for rehearing, reargument, and reconsideration of the Board's opinions in The Middle Atlantic Area Case, and of order denying original petition (Apr. 2).

E-1346 dismisses complaint of California Eastern Airways requesting suspension of freight rates filed on behalf of United Air Lines, Supplement 7 to Air Freight Tariff No. 3 CAB No. 8.

E-1347 issues a temporary certificate to Parks Air Lines; denies protests of certain carriers (Mar. 31).

E-1348 grants Parks Air Lines, temporary exemption from the provisions of sec. 401 (a) of the Act so that substitutions may be made of certain points served on route 91 (Mar. 31).

E-1349 amends temporary-mail-rate order E-898 issued to Monarch Air Lines concerning mail pay compensation over its entire system (Apr. 5).

### Airman Orders

#### Suspensions

S-147 suspends until July 17, 1948 any pilot certificate held by George Rollin McColley (Mar. 22).

S-150 suspends pilot certificate of James R. Crutchfield for 165 days (Mar. 31).

S-152 suspends for 10 days commercial certificate of Stephen V. Miskoff (Apr. 8).

SD-758 suspends for 6 months student certificate of Richard C. Rioux, for low flying over a congested area of Chicago, Ill. (Mar. 3).

SD-766 suspends for 3 months commercial certificate with flight instructor rating of Claude D. Goldsmith, for low flying over the town of Seymour, Tex. (Mar. 3).

SD-768 suspends for 9 months student certificate of Donald R. Anderson, for low flying over a congested area of Chicago, Ill. (Mar. 9).

SD-770 suspends for 6 months student certificate of Wm. R. Stover, for carrying a passenger (Mar. 9).

SD-771 suspends for 6 months private certificate of Wm. K. Bostford, for flying directly toward an on-coming freight train at an altitude barely above the rails. When apparently directly in front of the engine Bostford zoomed the craft and passed over, barely missing the engine (Mar. 9).

SD-775 suspends for 6 months student certificate of Robert N. Rosholt, for low flying in the vicinity of

Iola, Wis. (Mar. 11).

SD-777 suspends for 6 months private certificate of Bernard D. Weber for piloting an aircraft, which he damaged in landing at Skokie, Ill., from that City to Pal-Waukee Airport, Wheeling, Ill. (Mar. 10).

SD-778 suspends for 60 days student certificate of Robert J. Funk, for low flying over the village of Muskego, Wis. (Mar. 2).

SD-779 suspends for 60 days private certificate with airplane single engine land rating of Harold F. Gibbons, for operating an aircraft when it did not carry an airworthiness certificate or special authorization issue by the Administrator approving its operation. (Mar. 16).

SD-780 suspends for 90 days commercial certificate with airplane single and multi-engine land rating of Donald R. Patoka, for performing steep dives inside the Springfield Airport, Springfield, Ill., boundary, thereby endangering air traffic (Mar. 16).

SD-781 suspends for 9 months private certificate with airplane single engine land rating of Donald J. Carter, for low flying over an open-air assembly of persons in the vicinity of Lakota Beach, Wilmette, Ill. (Mar. 16).

SD-783 suspends for 6 months private certificate with airplane single engine land rating of John C. Keeler, Jr., for low flying over and in the vicinity of Channel Lake, Lake County, Ill. (Mar. 16).

SD-785 suspends for 6 months commercial certificate with airplane single and multi-engine land and instrument ratings of Thomas Maule, for low flying over the Elgin Country Club, Elgin, Ill. (Mar. 17).

SD-786 suspends for 6 months student certificate of Ronald E. Miles, for performing aerobatics over a

(Continued on Page 70)

## New Guide Has List Of Seaplane Bases For Air Vacationers

Anyone planning vacations by air which include trips to seaside, lake, or river, will find 453 seaplane bases listed in the new edition of the CAA "Seaplane Facility Directory." The number listed last year was 377.

The Directory has been prepared to encourage the use of seaplanes, especially for sport and recreation flying, it was announced by the Civil Aeronautics Administration.

These bases are situated in all parts of the country and most of them have facilities for two- to eight-place craft. Copies of the Directory are available from the CAA Office of Aviation Information, Washington 25, D. C., upon request.

Seaplane enthusiasts declare that transcontinental flying on floats or in flying boats is both safe and practical because of the many available water landing areas en route. As many as four possible routes have been described by seaplane users.

**Inaccessible Spots Opened.**—Among the advantages offered by the seaplane bases are the lure they have for the vacationer, whether he is seeking a water resort or would visit inaccessible places where good fishing and hunting are to be found. This of course includes both fresh- and salt-water areas.

Maine, with its many lakes and deeply bay-fretted shore line, provides seaplane facilities for the air vacationer at 40 points. Florida, which enjoys much the same advantages of fresh- and salt-water fishing and resorts, has 29 seaplane bases.

In the far West are many suitable ports. Washington lists 10. Forty-four bases in the northern Midwest section bring the many lakes and larger streams of Michigan, Minnesota, and Wisconsin within easy reach of the winged vacationer. Alaska, with its near pioneer conditions, is wide open for those who wish to fly to any of its 22 designated water ports.

The Mississippi delta and the surrounding inland area offer facilities at some half dozen places where wildlife is abundant and splendid fishing is afforded by stream and lake.

## Airman Orders

(Continued from Page 69)

congested area of Riverdale, Ill. (Mar. 19).

SD-788 suspends for 6 months student certificate of Robert T. Murray for flying directly toward an oncoming freight train at an altitude barely above the rails. When apparently directly in front of the engine Murray zoomed the craft and passed over barely missing the engine (Mar. 17).

SD-789 suspends for 3 months private certificate of Edward G. Reed, for low flying approximately 3 miles southwest of Boonville, Ind. (Mar. 19).

SD-790 suspends for 6 months private certificate of James I. Langston, for low flying over the congested area of Cayuga, Tex. (Mar. 19).

### Revocations

S-149 revokes flight instructor rating of Charles G. Pierce (Mar. 29).

S-151 revokes any certificate held by Lloyd Huelt (Apr. 1).

S-153 revokes any pilot certificate held by Thomas R. Murray (Apr. 16).

S-154 revokes any pilot certificate held by Carl D. Clauss (Apr. 16).

SD-759 revokes private certificate with airplane

## Plane Shipments Gain; Airframe Weight Drops

Airframe weight produced during March dropped 4.5 percent under the February total.

Civil aircraft shipments showed a 22 percent increase in airframe weight, and 25 percent increase in number over February, with March totals reaching 585 planes weighing 710,000 pounds.

Military acceptances in March totaled 276 planes against 155 in February. However, the acceptance of over 100 light liaison planes, most of them for the Army Ground Forces, accounted for the bulk of the increase in units over the previous month. Military airframe weight dropped 15 percent, to 1,242,600 pounds after 1,462,000 pounds in February, the highest for any single month since May 1946.

A review of first quarter totals for 1948 finds total airframe weight down 26.5 percent from the same period in 1947. The civil portion of these figures shows a drop of more than 60 percent, while military weight alone shows a 37 percent increase. Comparative figures for the two quarters are shown in the table below:

### FIRST QUARTER TOTALS

(000 pounds of airframe weight)

	1947	1948	Percent change
Civil.....	4,886.3	1,766.1	-63.9
Military.....	2,867.2	3,930.5	+37.1
Total.....	7,753.5	5,696.6	-26.5

March civil aircraft shipments were as follows:

	March	February
Total.....	585	467
By type:		
Personal (under 3,000 pounds airframe weight).....	571	453
Transport (over 3,000 pounds airframe weight).....	14	14
By number of places:		
2-place.....	337	221
3- and 4-place.....	222	228
Over 4-place.....	26	18
By total rated horsepower (all engines):		
1-74.....	135	35
75-99.....	157	160
100-399.....	277	256
400 and over.....	16	16

single engine land rating of Harold D. Farrell, for diving an aircraft and striking and fatally injuring James Evans at Shenk's Gravel Pit, near Durand, Mich.

SD-760 revokes private certificate with airplane single engine land rating of Karl Thillemann, for low flying over the City of Racine, Wis. (Mar. 4).

SD-761 revokes student certificate of Glenford W. Rozell, for low flying over the City of Medina, Ohio (Mar. 5).

SD-762 revokes student certificate of Kenneth M. Snyder, for carrying a passenger (Mar. 6).

SD-763 revokes student certificate of Wm. R. Slates, for carrying a passenger (Mar. 2).

SD-764 revokes student certificate of Terry A. Ray, for carrying a passenger (Mar. 2).

SD-765 revokes student certificate of Thurston J. Hinyub, for carrying a passenger (Mar. 3).

SD-767 revokes student certificate of Louis W. Holtman, for carrying a passenger (Mar. 3).

SD-769 revokes student certificate of Richard F. Krauss, for low flying over the City of South Bend, Ind. (Mar. 2).

## New Ruling Approves Ship-Airline Link For Sale of Tickets

The Civil Aeronautics Board, in an opinion recently released, approved an agreement between Northwest Airlines, Inc. and American President Lines, a steamship company, which provides that American President is made general agent for Northwest and will sell exchange orders for passage over Northwest in certain of American President's offices covering most of the Atlantic and Pacific areas and countries adjacent thereto. Northwest, under the agreement, is made representative of the steamship company to perform the same services at Northwest's offices throughout the world for steamship transportation between certain Pacific coast and Asiatic ports.

Certain joint sea-air arrangements between air and steamship carriers have been previously approved by the Board as desirable in the public interest. However, the Board recently disapproved an agency agreement between an air line and a steamship company stating, among other things, that "When the agency is made exclusive it further reduces the control of the carrier since it frees the agent from the threat of competition during the life of the contract." In 1942 the CAB disapproved a similar agreement, stating in that case that "The development of air transportation over so large an area should not be entrusted to the exclusive agency of a steamship company whose interests now conflict to a certain extent and are likely to conflict increasingly, with the interests of the air carrier."

In its recent decision, the Board stated that "If the present agreement between Northwest and President Lines provided for the same exclusive reliance by an air carrier upon a competing surface carrier for traffic solicitation, we would be required to disapprove it as adverse to the public interest. However, consideration of the Northwest-President Lines agreement \* \* \* show(s) that the arrangements are not subject to the basic objections which made both of the prior cited agreements adverse to the public interest."

It was further stated that evidence shows that Northwest is not only free under the contract to maintain its own traffic solicitation system, but does in fact maintain such a system in the Pacific area which it serves. Through approval of this agreement by the Board it is possible for Northwest to obtain adequate traffic solicitation at off-line points and to facilitate the development of joint air-sea arrangements which are a basic part of the contract.

SD-774 revokes student certificate of A. Courtney Hafela, for carrying a passenger (Feb. 9).

SD-776 revokes student certificate of E. J. England, for carrying passengers (Mar. 11).

SD-782 revokes student certificate of Robert E. Wollard, for circling a house at 200 feet and causing the aircraft he was piloting to crash (Mar. 16).

SD-784 revokes student certificate of Edward C. Agles, for piloting an aircraft while under the influence of intoxicating liquor (Mar. 16).

SD-787 revokes commercial certificate with airplane single engine land rating of Leland Williams, for low flying near Bellair, Ill. While carrying 2 passengers not equipped with chutes, he executed a steep dive and after striking a power line crashed the aircraft (Mar. 17).

SD-791 revokes student certificate of Robert J. Langlois, for carrying a passenger (Mar. 18).

SD-792 revokes private certificate with airplane single engine land rating of Ronald H. Arnston, for piloting a twin-engine craft while carrying a passenger and operating an aircraft in an unairworthy condition (Mar. 18).

## CAB Study Shows Ocean Travel Gain For U. S. Air Lines

The Civil Aeronautics Board has released a study entitled "Analysis of Trans-Atlantic Passenger Traffic Out-Bound From and In-Bound to New York City." Dated April 1948, the study covers the period July-December 1947 for the three United States air lines and five foreign air carriers operating across the Atlantic.

The study shows that during July-December 1947, United States air carriers transported 71.2 percent of total air passenger traffic, including 77.3 percent of all United States-citizen travelers and 65.6 percent of all foreign citizens. The United States carriers transported 81,305 passengers of whom slightly more than half were United States citizens. Foreign carriers transported 32,823 passengers in both directions, of whom 20,430 had foreign citizenship and 12,393 United States citizenship. A similar study released in September 1947, for the first 6 months of that year, shows that United States air lines carried 60,398 trans-Atlantic passengers, or 75.4 percent of the total passenger traffic for that period.

**Data on Eight Air Lines.**—The study contains data on American Overseas Air Lines, Inc., Pan American Airways, Inc., and Transcontinental and Western Air, Inc. and five foreign carriers, Air France, BOAC (United Kingdom), KLM-Royal Dutch Air Lines, SABENA (Belgium) and SAS-Scandinavian Air Lines System (Denmark, Norway, Sweden). It shows that a total of 3,104 scheduled passenger-carrying flights in both directions across the North Atlantic were made by the three United States certificated air carriers, as compared with 1,312 trans-Atlantic flights made by the five foreign carriers. The 3,104 total for United States carriers is an increase of 25 percent over the number of flights by these air lines during the first 6 months of 1947.

The total volume of trans-Atlantic air travel from New York City in both directions during the last half of 1947 was 114,128 passengers, an increase of 42.5 percent over the figure for the first half of the year.

This study, prepared in the Analyses Division of the Economic Bureau of the Board, contains numerous charts and statistical tabulations, and taken with previous similar studies, presents a comprehensive picture of the essentials of the United States competitive position in North Atlantic air traffic, and an accurate idea of the short-term prospects for maintaining this position.

## Aircraft Engine Output Up As Military Shipments Gain

Aircraft engine manufacturers reported a total output value of \$30,157,000 for March, an increase of 16 percent over the previous month. Military shipments accounted for 83 percent of this total.

Civil shipments included 1,093 engines plus spares with a value of \$5,174,000. Civil shipments for February were 1,007 engines with spares valued at \$4,722,000.

Shipments to the United States military services totaled 383 engines and spares with a value of \$24,893,000. Previous month shipments were 342 engines, with a value of \$18,883,000.

JUNE 15, 1948

## Civil Aviation Highlights

	1948	1947
Airports recorded with CAA, May 1.....	6,002	4,769
By type: <sup>1</sup>		
Commercial.....	2,958	2,162
Municipal.....	1,909	1,510
CAA intermediate.....	167	193
Military.....	423	719
All others.....	545	185
Civil airports by class:		
Total.....	5,579	4,050
Class I and under.....	3,748	2,666
Class II.....	865	727
Class III.....	440	350
Class IV.....	337	219
Class V.....	119	63
Class VI and over.....	70	25
Scheduled air carrier aircraft, May 1.....	976	856
Civil aircraft production, March:		
Total.....	585	1,785
2-place models.....	337	789
3- and 4-place models.....	222	972
Over 4-place models.....	26	24
Certificates approved, March:		
Student pilots.....	12,215	14,436
Private pilots.....	6,754	7,671
Commercial pilots.....	527	482
Airline transport pilots.....	116	82
Mechanics (original certificates).....	878	1,354
Ground instructors (original certificates).....	263	450
Flight instructor ratings.....	291	574
Instrument ratings.....	119	260
Traffic control activity, March:		
Aircraft operations, CAA airport towers.....	1,448,001	1,306,183
Fix postings, CAA airway centers.....	829,919	812,459
Washington National Airport operations, April:		
Scheduled air carrier:		
Passengers departing.....	52,289	57,155
Passengers arriving.....	54,140	51,765
Aircraft arrivals and departures.....	8,815	8,876
Other aircraft arrivals and departures.....	4,405	5,902
San Francisco Municipal Airport operations, March:		
Scheduled air carrier:		
Passengers departing.....	31,338	35,097
Passengers arriving.....	32,039	32,724
Aircraft arrivals and departures.....	5,992	4,796
Other aircraft arrivals and departures.....	5,235	9,565
Oakland Municipal Airport operations, March:		
Scheduled air carrier:		
Passengers departing.....	4,142	4,601
Passengers arriving.....	3,495	3,887
Aircraft arrivals and departures.....	3,379	2,881
Other aircraft arrivals and departures.....	15,290	14,338
Miami International Airport operations, February:		
Scheduled air carrier:		
Passengers departing.....	49,551	(2)
Passengers arriving.....	50,142	(2)
Aircraft arrivals and departures.....	6,959	7,338
Other aircraft arrivals and departures.....	9,731	10,473

<sup>1</sup> For airport type definitions see "Civil Aviation Highlights", Civil Aeronautics Journal, March 15, 1948.

<sup>2</sup> Not available.

## Air Traffic Control

(Continued from Page 61)

would be executed on a contractual basis by universities and commercial laboratories and through special arrangements with other government facilities.

The Research and Development Board in turn has established a continuing Committee on Navigation with representation from the Military Establishment, the Department of Commerce, the Treasury Department (Coast Guard), and appropriate civilian membership, to have special cognizance over the common air navigation system project as well as over the tactical navigation programs of the services.

In addition to Mr. Damon, the membership of the Ad Hoc Committee on Navigation included: Dr. M. J. Kelly, Bell Telephone Laboratories, Inc.; Dr. Hector R. Skifter, Airborne Instrument Laboratory, Inc.; and T. P. Wright, former Administrator; C. I. Stanton, former Deputy Administrator; and B. A.

Denicke, Research and Development Board Liaison Officer of the Civil Aeronautics Administration. F. B. Lee, Deputy Administrator, replaced Mr. Wright as the Commerce member of the committee when Mr. Wright resigned his CAA post.

Military members were Maj. Gen. H. M. McClelland, Col. J. H. Gillespie, Col. S. A. Mundell, Dr. Robert F. Nicholson, and Harry Davis of the Department of Air Force; Lt. Col. Willice E. Groves, Col. Howard W. Serig, Delmas C. Stutler, and Arthur D. Bennett of the Department of the Army; Rear Adm. W. G. Tomlinson (Rear Adm. E. D. Cruise, vice, Rear Admiral Tomlinson) Capt. R. C. Sutliff, Capt. E. B. Patterson, Capt. A. S. Born, Capt. R. B. McCoy, and Comdr. E. W. Humphrey of the Department of the Navy; and Capt. C. H. Peterson of the United States Coast Guard.

Mr. W. J. Merchant of the RDB Secretariat served as Secretary of the Committee.



## CAA Certificate Given First Jet Engine for Commercial Transport

An Allison jet engine became the first engine to receive Civil Aeronautics Administration approval for commercial transport operation when F. B. Lee, Acting Administrator of Civil Aeronautics, presented Ronald M. Hazen, Director of Engineering, Allison Division of General Motors Corp., with a CAA Approved Type Certificate.

The certificate was issued for the Allison Model 400-C4 on the basis of qualification tests for reliability and durability identical to those required of any engine—reciprocating or turbine—in commercial transportation.

This engine develops more than 4,000 pounds of static thrust and weighs 2,000 pounds; its specific weight is less than one-half pound per each pound of thrust that it produces.

The engine will have an equivalent propeller horsepower rating of approximately 7,000 horsepower, if it powers an aircraft capable of a flying speed of 550 miles per hour.

It is capable of using either kerosene or gasoline as fuel. In addition, during take-off operation its normal power can be increased an appreciable amount by internal cooling means accomplished by introducing a mixture of water and alcohol.

**Milestone in Development.**—Certification of jet engines for commercial transports marks a milestone in the development of jet engines in this country and represents an outstanding achievement for the joint efforts of Allison Division of General Motors Corp., Lockheed Aircraft Corp., and the United States Air Force.

Since the end of World War II, engineers representing these three organizations have worked intensively to combine with the high power of the Model 400 the dependability and reliability demanded of any type of engine which is to be installed in commercial airplanes.

Extensive operational experience was gained from the United States Air Force P-80 Lockheed Shooting Star which has been produced in larger quantities than any other jet powered airplane and which has accumulated a total of more than 100,000 hours flying time with this type of engine.

Out of this experience came improvements in engine components which have increased operational life of the engine from 25 to 200 hours and at the same time raised the power rating from 3,875 pounds to 4,600 pounds thrust.

## Gewirtz Leaves Position as Assistant to CAB Chairman

Joseph J. O'Connell, Jr., Chairman of the Civil Aeronautics Board, announced recently that he had accepted, with extreme regret, the resignation of Stanley Gewirtz, Executive Assistant to the Chairman, as of June 15, 1948. Mr. Gewirtz was appointed to this post in June 1946 by former Chairman James M. Landis, and served as his Executive Assistant until January 1, 1948. Since then he has served as Executive Assistant to Chairman O'Connell who stated that Mr. Gewirtz was leaving, despite his urgent invitation to continue in the position, because of his desire to enter the private practice of law in Washington.

The Chairman stated further that Mr. Gewirtz had agreed to remain in his job until June 15, in order to provide a continuity on the staff of the Chairman's office. At that time he will be replaced by Paul W. Cherington who, since January 1947, has been CAB liaison representative to the Air Coordinating Committee and Coordinator of Special Investigations for the Board.

## New CAA Administrator Takes Office



D. W. Rentzel (right) takes oath of office, administered by Secretary of Commerce Charles Sawyer. Mr. Rentzel succeeds T. P. Wright as Administrator of Civil Aeronautics.

## Progress in Simplifying Air Transport Reviewed

A review of progress made in simplifying international air transport has been issued by the Air Coordinating Committee through its Economic Division's Subcommittee on Facilitation of International Civil Aviation.

The report, entitled "Simplifying International Air Transport," summarizes the findings of the Subcommittee's survey team which visited major airports of entry in the United States during the spring of 1947 and reviews the progress made in the elimination or simplification of many of the practices hampering speedy and efficient processing of air traffic by the agencies concerned. The report, which also defines various problems affecting the facilitation of international air transport which urgently require solution but which thus far have not been resolved, is available on request to H. G. Tarrington, Secretary, ACC Subcommittee on Facilitation of International Civil Aviation, room 5106, Commerce Building, Washington, D. C.

**Headed by Alison.**—The "Facilitation" Subcommittee is under the chairmanship of Mr. John R. Alison, Assistant Secretary of Commerce, and its membership consists of representatives from the Departments of State, Treasury, Justice, Post Office, Agriculture, Navy, and Air Force, the Civil Aeronautics Board, and the United States Public Health Service, and advisers from the air transport industry. The subcommittee has the continuing responsibility for recommending simplified administrative procedures and draft legislation to eliminate unnecessary paper work and other practices which tend to retard the speedy movement of international air traffic.

## CAA Awards Contract For Approach Lights

A contract for high-intensity approach lights to be installed at Washington National and Los Angeles Municipal Airports has been awarded by the Civil Aeronautics Administration.

Used in conjunction with the CAA Instrument Landing System, the high-intensity lights will help pilots to orient themselves in the final stages of low-visibility approaches. The pilot will be able to see the lights through a moderate depth of fog, and make the last part of his landing approach without use of instruments.

**First for Civilian Use.**—The Washington and Los Angeles installations will be the first for regular civilian aviation use, although several experimental and military high-intensity systems have been operated for some time. Each installation costs about \$100,000.

The contract for 61 of the lights, which cost \$700 each, went to the American Gas Accumulator Co., of Elizabeth, N. J. They will be of a type which has been flight-tested at the Army-Navy-Civil Landing Aids Experiment Station, Arcata, Calif.

The powerful lights include a new type of optical system consisting of ground and polished glass and molded red plastic lenses. Each light is equipped with a 5-kilowatt incandescent lamp. The system comprises a row of lights 3,000 feet long, spaced 100 feet apart, extending out from the approach end of the instrument runway. The intensity of the lights can be regulated from the tower. The full-light intensity is needed only under unusually adverse conditions.

The contract with American Gas Accumulator Co. calls for delivery of the lights in September. If other necessary equipment can be manufactured and delivered in time, the two installations will be ready for use late this fall.

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